

**WHAT IS CLAIMED IS:**

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1. A linear seat recliner for use in a motor vehicle having a seat with a seat back pivotally connected to a seat bottom, the seat being operable in a plurality of use positions ranging from an upright position to a fully reclined position, the linear seat recliner comprising:
  - 5 a housing adapted to be coupled to one of the seat back and the seat bottom;
  - a latching mechanism coupled to said housing; and
  - a recliner rod including a body having a first end and a second end, said body having a substantially planar top flat diametrically opposed and parallel to a substantially planar bottom flat, said top flat including a plurality of teeth positioned
  - 10 at said first end of said body, said first end of said recliner rod selectively engaged with said latching mechanism and said second end of said recliner rod adapted to be coupled to the other of the seat back and the seat bottom.
2. The linear seat recliner of Claim 1 wherein said recliner rod is adapted for sliding from a first position corresponding to the fully reclined position to a second position corresponding to the upright position, said recliner rod including a stop engaging said housing when said recliner rod is in said first position.
3. The linear seat recliner of Claim 2 wherein said stop is integrally formed in said recliner rod.
4. The linear seat recliner of Claim 1 wherein said body of said recliner rod has a hexagonal cross section.
5. The linear seat recliner of Claim 1 wherein said housing includes a guide mechanism supporting said bottom flat of said recliner rod.
6. The linear seat recliner of Claim 5 wherein said guide mechanism includes a plurality of rivets coupled to said housing.

7. The linear seat recliner of Claim 1 wherein said top flat and said bottom flat extend substantially between said first and second ends.

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8. A reclining seat assembly comprising:  
a seat bottom having a side rail;  
a seat back having a support rail pivotally coupled to said side rail;  
a linear seat recliner including a housing secured to one of said side rail  
5 and said support rail, a recliner rod having a first end supported for relative linear motion within said housing and a second end having an aperture, said recliner rod having a substantially planar top flat and a substantially planar bottom flat positioned parallel thereto, said second end pivotally coupled to the other of said side rail and said support rail.

9. The recliner seat assembly of Claim 8 wherein said top flat of said recliner rod includes a plurality of spaced apart teeth positioned on a portion thereof.

10. The reclining seat assembly of Claim 8 wherein said recliner rod includes a stop radially protruding from said first end for restricting the linear motion of said recliner rod relative to said housing.

11. The reclining seat assembly of Claim 10 wherein said stop is integrally formed to said first end of said recliner rod.

12. The reclining seat assembly of Claim 8 wherein said recliner rod is supported by a plurality of rivets.

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13. A recliner rod for a linear seat recliner for use in a seat having a seat back pivotally connected to a seat bottom, the seat operable in a plurality of use positions ranging from an upright position to a fully reclined position, the linear seat recliner having a housing coupled to one of the seat back and the seat bottom, the
- 5 linear recliner mechanism also having a latching mechanism coupled to the housing, the recliner rod comprising:

a body having a first end and a second end, said body further having a top flat diametrically opposed and substantially parallel to a bottom flat;

a paddle integrally formed with said body at said second end;

10 a stop integrally formed with said body at said first end;

a plurality of teeth positioned on said top flat, said plurality of teeth adapted to be engaged by the latching mechanism, said second end adapted to be coupled to the other of the seat back and the seat bottom.

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14. The recliner rod of Claim 13 wherein said top and bottom flats extending from said first end to said second end.

15. The recliner rod of Claim 13 wherein said recliner rod is adapted to slide relative to the housing.

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16. The recliner rod of Claim 15 wherein said stop is adapted to engage the housing to limit the travel of said recliner rod relative to the housing.

17. The recliner rod of Claim 16 wherein said stop is adapted to engage the housing when the seat is in the fully reclined position.

18. A method of forming a recliner rod for a linear seat recliner for use in a seat having a seat back pivotally connected to a seat bottom, the seat being operable in a plurality of use positions ranging from an upright position to a fully reclined position, the linear seat recliner having a housing coupled to one of the seat back and
- 5 the seat bottom, the linear recliner mechanism also having a latching mechanism coupled to the housing, the method comprising the steps of:

providing a recliner rod blank having a first end, a second end, a top flat, and a bottom flat substantially parallel to said top flat;

- deforming said second end of said blank to define a paddle adapted to be
- 10 coupled to the other of the seat back and the seat bottom;

deforming said first end of said blank to define a stop adapted to engage the housing when the seat is in its fully reclined position; and

forming a set of teeth on said top flat, said set of teeth adapted to be selectively engageable by the latching mechanism.

19. The method of Claim 18 wherein said step of providing said recliner rod blank includes extruding said blank.

20. The method of Claim 18 wherein said step of defining top and bottom flats includes coining said body.

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